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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

PHAN, THIEM D

ART UNIT PAPER NUMBER

3729

DATE MAILED: 08/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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| | | | |
|------------------------------|-------------------------------|---------------------------|--|
| Office Action Summary | Application No. 10/616,871 | Applicant(s) DU ET AL. | |
| | Examiner Tim Phan | Art Unit 3729 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 141, 142, 145-157, 232, 234, 235, 240, 242 and 243 is/are pending in the application.
- 4a) Of the above claim(s) 142 and 149-157 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 141, 145-148, 232, 234, 235, 240, 242 and 243 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>7/1/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed on 5/09/05 has been fully considered and made of record.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 141 is rejected under 35 U.S.C. 102(b) as being anticipated by Gstohl et al (US 5,727,307).

Gstohl et al teach a method of making an armature for an electric motor, comprising:

- securing a lamination stack (Fig. 3, 2) having slots (Fig. 3, 15) therein on an armature shaft (Fig. 3, 1);
- securing a commutator (Fig. 3, 5) on one end of the armature shaft;
- winding magnet wires (Fig. 3, 14) in the slots in the lamination stack and securing ends of the magnet wires to the commutator (Fig. 3, 5); and
- molding plastic (Fig. 5, 19) to at least partially encase the magnet wires in the plastic to hold them in place (Fig. 3, 14) in the slots without using coil stays or coil supports; and

- wherein winding the magnet wires in the slots includes winding them so that they also occupy portions of the slots that are occupied by coil stays or supports in an armature having the same size as the given armature where coil stays or supports are used to hold the magnet wires in place in the slots

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 145-148, 232, 234, 235, 240, 242 and 243, are rejected under 35 U.S.C. 103(a) as being unpatentable over Gstohl et al.

As applied to claims 145 and 146, Gstohl et al teach a method of making an armature for an electric motor, which reads on applicants' claimed invention, except for describing the applied pressure to the magnet wires into the slots.

It would be obvious to one of ordinary skill in the art at the time the invention was made to press the magnet wires in the slots, since it is known in the art that the magnet wires (Fig. 3, 14) are tightly stretched and wound into the slots (Fig. 3, 15) for plastic molding (Fig. 5, 19).

As applied to claims 147 and 148, Gstohl et al teach a method of making an armature

for an electric motor, which reads on applicants' claimed invention, except for applying iso-static pressure by a fluid bladder to the magnet wires into the slots.

It is mere matter of design choice to apply iso-static pressure by a fluid bladder to the magnet wires into the slots and it appears that the invention would perform equally well with the magnet wires (Fig. 3, 14) being tightly stretched and wound into the slots (Fig. 3, 15) for plastic molding (Fig. 5, 19).

As applied to claims 232 and 240, Gstohl et al teach a method of making an armature for an electric motor, comprising:

- securing a lamination stack (Fig. 3, 2) having slots (Fig. 3, 15) therein on an armature shaft (Fig. 3, 1);
- securing a commutator (Fig. 3, 5) on one end of the armature shaft;
- winding magnet wires (Fig. 3, 14) in the slots in the lamination stack and securing ends of the magnet wires to the commutator (Fig. 3, 5); and
- molding plastic (Fig. 5, 19) to at least partially encase the magnet wires in the plastic plastic to hold them in place (Fig. 3, 14) in the slots without using coil stays or coil supports; and
- wherein winding the magnet wires in the slots includes winding them so that they also occupy portions of the slots that are occupied by coil stays or supports in an armature having the same size as the given armature where coil stays or supports are used to hold the magnet wires in place in the slots; except for disposing the armature in a stator of a

power tool, which is well known in the art.

It would be obvious to one of ordinary skill in the art at the time the invention was made to dispose the armature in a stator of a power tool or any electrical motor, since it is known in the art that the armature is a rotor with a shaft (Col. 1, lines 5-10), which must be inserted in a stator to form an electrical motor.

As applied to claims 234, 235, 242 and 243, Gstohl et al teach a method of making an armature for an electric motor, which reads on applicants' claimed invention, except for describing the applied pressure to the magnet wires into the slots.

It would be obvious to one of ordinary skill in the art at the time the invention was made to press the magnet wires in the slots, since it is known in the art that the magnet wires (Fig. 3, 14) are tightly stretched and wound into the slots (Fig. 3, 15) for plastic molding (Fig. 5, 19).

Response to Arguments

6. Applicants' arguments filed on 6/29/04 have been fully considered but they are not persuasive for the following reasons:

Applicants urge that the prior art, Gstohl et al, is silent about the limitations of "... to hold them in place in the slots without using coil stays ... occupy portions of the slots that are occupy by coil stays ... magnet wires in the slots." (Claims 141, 232 and 240, bottom half;

Remarks, page 11, last paragraph – page 12, 1st paragraph); applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. Moreover, Gstohl et al do not have to use the coil stays or supports because the stress-winding of the magnet wires keeps the wires (Fig. 3, 14) in the slots and the slots must be open instead of being closed by coil stays or supports in order to have the thermosetting paste flown into the slots and filled any empty space within for optimized plastic molding.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.

Applicants' amendment necessitated the new ground of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim Phan whose telephone number is 571-272-4568. The examiner can normally be reached on M - F, 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tim Phan
Examiner
Art Unit 3729



A. DEXTER TUGBANG
PRIMARY EXAMINER

tp
August 12, 2005